VALKO, P.

Connection between the intensity of rainfall and climate factors. p. 255. Vol. 38, no. 2, 1956. VIZUGYI KOZLEMENYEK. HYDRAULIC ENGINEERING, Budapest.

SOURCE: East European List, (EEAL) Library of Congress. Vol. 6, no. 1, January, 1956.

VALKO, P.

Estimation of the maximum possible precipitation.

P. 513 (VIZUGYI KOZLEMENYEK) Budapest, Hungary Vol. (38) No. 4, 1956.

SO: Monthly Index of East European Acessions (AEEI) Vol. 6, No. 11 November 1957.

VALKO, Pavol, inz.

The wide gauge railroad track will open on May 1, 1966.
Zel dop tech 13 no.1:13-14 '65.

VALKO, P.

Relation to smoking to malignant tumors of the larynx. Cesk. otolar. 1 no. 3:102-105 1952. (CIML 24:1)

1. Of the Otolaryngological Clinic (Head--Prof. A. Pfeuchtel, M.D.) of Charles University.

RUBES, M., Dr.; VAIKO, P. Dr.

Comparative studies on complications in otitis media before and during the era of antibiotics. Cas.lek.cesk. 91 no.33:958-964 15 Aug 52.

1. Z otorhinolaryngologicke kliniky KU. Prednosta: prof. A. Precechtel.

(OTITIS MEDIA, complications,
before & after descovery of antibiotics, comparison)
(ANTIBIOTICS, therapeutic use,
otitis media, comparison of compl. in otitis before & after discovery of antibiotics)

VALKO, Peter

Significance of the bursa pharyngea in otolaryngology. Csl otolaryn 3 no.1:37-42 Mr '54. (EEAL 3:8)

1. Otolaryngologicka klinika university Karlovy v Praze, prednosta prof. Dr A.Precechtel.

(PHARYNX, diseases,
*bursa pharyngea hypersecretion & cysts)
(CYSTS,
*bursa pharyngea)

VALKO, Petr, As., MUDr.

Results of the treatment of cancer in otorhinolaryngological practice. Cas. lek. cesk. 94 no.47-48:1308-1313 25 Nov 55.

1. Z otolaryngologicke kliniky KU. Prednosta: akad. Ant. Precechtel.
(OTORHINOLARYNGOLOGY,
otorhinolaryngol. cancer, ther., results.)

VALKO, Peter, As., Dr.

Segmental spasms of the esophagus with laryngospasm. Cesk. otolar. 5 no.3:171-175 May 56.

1. Z otolaryngologicke kliniky KU v Praze, prednosta: akademik A. Precechtel.

(LARYNX, diseases,
spasm, with segmental spasms of esophagus (Cz))
(ESOPHAGUS, diseases,
spasms, segmental, with laryngospasm (Cz))
(SPASM,
esophagus, segmental, with laryngospasm (Cz))

VAL'KOV, A., kapitan

Preparation of decontaminating solution in winter. Vo n. vest. 43 no.12:25-26 D '63. (MIRA 17:2)

VAL'KOV, A. (Nizhniy Tagil)

Masters of the "Kapital'naia." Okhr.truda i sots.strakh. 6 no.2:13-14 F '63. (MIRA 16:2)
(Nizhniy Tagil—Iron mines and mining—Hygienic aspects)

L 2202-66 EWT(1) RO

ACC NR: AP6009039 (A) SOURCE CODE: UR/0018/65/000/011/0041/0042

AUTHOR: Val'kov, A. (Captain)

ORG: None

TITLE: Basis for success

SOURCE: Voyennyy vestnik, no. 11, 1965, 41-42

TOPIC TAGS: chemical decontamination, CW equipment, CW decontamination equipment

ABSTRACT: The actions of a chemical decontamination company providing aid to a tank battalion are described. Special decontamination motor vehicles were distributed along the tank column in a ratio of one servicing vehicle for every three or four tanks. A decontamination control station was established 100 to 200 m ahead of the column, while a water supply station was placed at a distance of 25 m. At least two water-tank vehicles were needed to satisfy the demand for water (about 7000 liters). The water from rivers could also be used. The decontaminated tanks were checked by the control station. In connection with the decontamination of the tank crews

Card 1/2

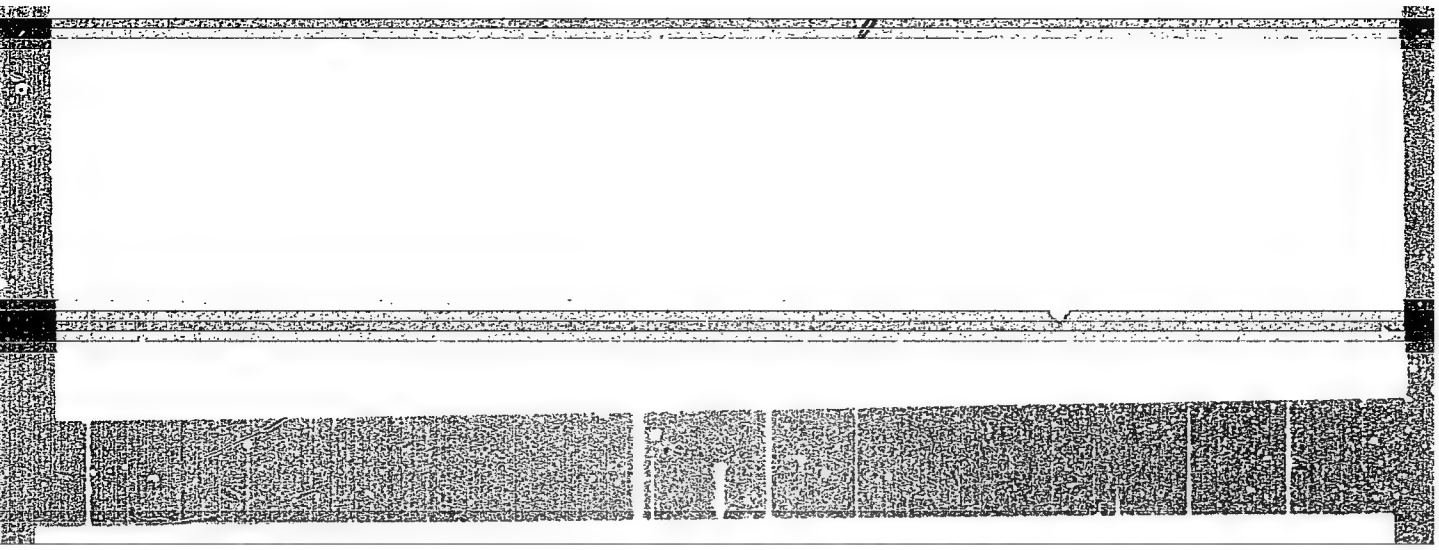
L 22042-66

ACC NR: AP6009039

and personnel, it was mentioned that due to the absence of precise instructions the company applied its own methods. The procedures of decontamination were described including the removal of protective clothing, use of showers, preserving of documents, treatment of skin, getting new decontaminated clothing and final checking. The utensils used for cooking and eating underwent a steam treatment in a special device. This device was briefly described and schematically illustrated. A rack equipped with special plastic envelopes for keeping articles and clothing was also described and shown in a figure. Orig art. has: 2 figures.

SUB CODE: 15 / SUBM DATE: None / ORIG REF: 000 / OTH REF: 000

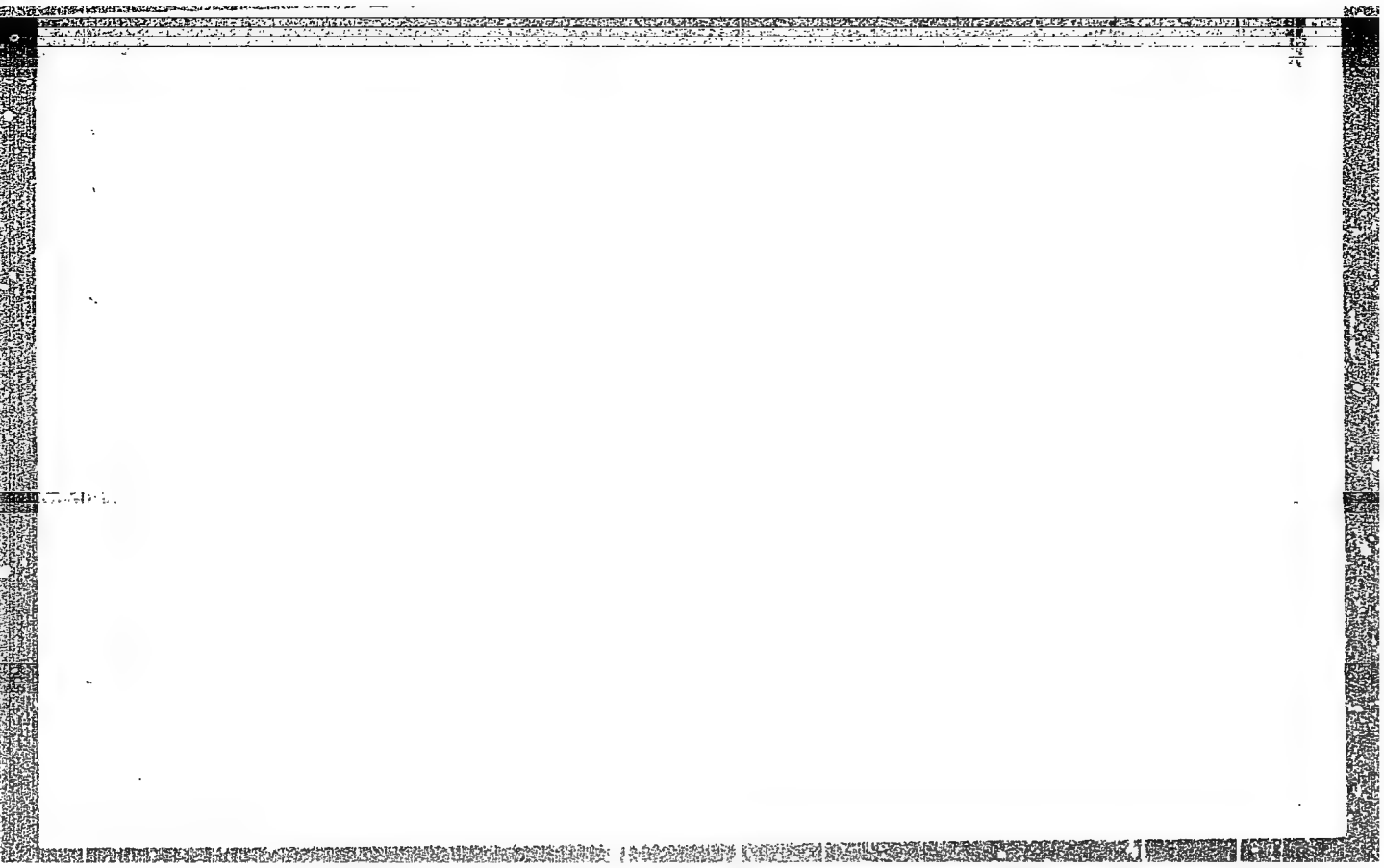
Card 2/2 MJS



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001858510007-6"

ACCESSION NR: AP5015506 UR/0286/65/000/008/0039/0040
621.385.6

ABSTRACT: The Author Certificate introduces a cathode subassembly for an electron tube with a plane-type oxide-coated cathode mounted in a cylindrical holder. The holder includes a metal ring sealed to three ceramic supports, an elastic disk-shaped diaphragm, a grid, and a



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001858510007-6"

VAL'KOV, A.M., inzh.-polkovnik v otstavke; KUSTOV, A.I., polkovnik intendantskoy sluzhby v otstavke; DERBENEVA, Ye.P., sluzhashchaya Sovetskoy Armii agronom; TRUTNEV, N.F., polkovnik intendantskoy sluzhby zapasa; RYABOV, I.G., polkovnik intendantskoy sluzhby v otstavke; LUPPOV, A.P., polkovnik zapasa; DIKUSHIN, V.F., general-mayor tekhnicheskikh voysk v otstavke; LAVROV, I.A., podpolkovnik med. sluzhby; DMITRIYEV, N.D., polkovnik veterinarnoy sluzhby zapasa; IVANOVTSEV, P.V., podpolkovnik veter. sluzhby kand. veter. nauk; SAFRONOV, I.V., general-leytenant v otstavke; ZHALKOV, S.I., red.

[Unit administrator's manual] Spravochnik voiskovogo khoziaistvennika. Moskva, Voenizdat, 1965. 462 p. (MIRA 18:6)

STEPANOV, D.; RODINOV, Ya. A.; KUVALDIN, B. I., inzh. (Moskva); VAL'KOV, A. S., inzh. (Moskva); LAGOYSKIY, A. I., inzh. (Vil'nyus); LUZHENOVSKIY, A. G., inzh. (Moskva)

"Arrangement and maintenance of narrow-gauge railroad tracks" by G. E. Skorodumov, A. I. Smirnov, M. P. Smirnov. Reviewed by D. Stepanov and others. Put' i put. khoz. 6 no.8:45-46 '62. (MIRA 15:10)

1. Glavnyy inzh. Estonskoy dorogi, Tallin (for Stepanov).
2. Nachal'nik sluzhby puti Estonskoy dorogi, Tallin (for Rodinov).

(Railroads, Narrow-gauge—Track)
(Skorodumov, G. E.) (Smirnov, A. I.)
(Smirnov, M. P.)

KOMAROVSKAYA, Anna Stepanovna, kand. tekhn. nauk; TRUSOV, Vasiliy Pavlovich; VAL'KOV, Aleksandr Stepanovich, inzh.; URTAYEV, G.T., red.; MEL'NIKOVA, A.G., red. izd-va; PARAKHINA, N.L., tekhn. red.

[Maintenance and repair of narrow-gauge logging railroads] Soderzhanie lesovoznykh uzkokoleinykh zheleznykh dorog. Moskva, Goslesbumizdat, 1961. 121 p. (MIRA 14:9)
(Railroads, Narrow-gauge) (Lumber—Transportation)

ZVYAGINTSEV, O.Ya.; FROLOV, Yu.G.; CHEN' TSZIN'-BAN; VAL'KOV, A.V.

Extraction of sulfuric acid and uranyl sulfate with N-alkylanilines.
Zhur.neorg.khim. 10 no.4:981-985 Ap '65. (MIRA 18:6)

MIRONOV, N.P.; TINKER, I.S.; SHISHKIN, A.K.; SHIRANOVICH, P.I.; VAL'KOV, B.G.; IVANOV, I.Kh.; KARPUZIDI, K.S.; KLIMCHENKO, I.Z.; SHIRYAYEV, D.T.

Contemporary status of the plague focus in the northwestern Caspian Sea region and problems in its further study. Sbor. nauch. rab. Elist. protivochum. sta. no. 1:19-29 '59.
(MIRA 13:10)
(CASPIAN SEA REGION—PLAGUE)

LEVI, M.I.; VAL'KOV, B.G.; SHTEL'MAN, A.I.; KANATOV, Yu.V.

Experimental plague among different populations of southern gerbils (M.meridianus Pall.). Sbor. nauch. rab. Elist. protivochum. sta. no. 1:43-64 '59. (MIRA 13:10)
(COLGA DELAT REGION—PLAGUE) (BERBILS)

LEVI, M.I.; VAL'KOV, B.G.; MINKOV, G.B.; NOVIKOVA, Ye.I.

Experimental plague in different populations of the lesser suslik. Sbor. nauch. rab. Elist. protivochum. Sta. no. 1:65-83 '59. (MIRA 13:10)

(SUSLIKS) (PLAGUE)

VAL'KOV, B.G.; KANATOV, Yu.V.; VAL'KOVA, Ye.R.

Sensitivity to the plague microbe and toxin of young susliks from various geographic regions. Sbor. nauch. rab. Elist. protivochum. sta. no. 1:85-92 '59. (MIRA 13:10)
(SUSLIKS) (PLAGUE)

BOROD'KO, S.L.; PILIPENKO, V.G.; POLYAKOVA, A.M.; VAL'KOV, B.G.

Immunological changes in persons inoculated epicutaneously against plague, brucellosis, and tularemia. Sbor. nauch. rab. Elist. protivochum. sta. no. 1:205-213 '59. (MIRA 13:10)
(IMMUNOLOGY) (PLAGUE) (BRUCELLOSIS) (TULAREMIA)

VAL'KOV, B.G.; MORDVINKIN, G.I.; VAL'KOVA, Ye.R.

Observations on the preservation of tularemia infection in the natural microfocus. Sbor. nauch. rab. Elist. protivochum. sta. no. 1:239-244 '59. (MIRA 13:10)
(WEST KAZAKHSTAN PROVINCE--TULAREMIA)

VAL'KOV, B. G., SHTEL'MAN, A. I., KANATOV, YU. V. and LEVI, M. I.

"Experimental Plague in Different Populations of Meridional Voles."

Tenth Conference on Parsitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Elistinskaya Anti-Plague Station

VAL'KOV, B. G., MINKOV, G. B., NOVIKOVA, YE. I. and LEVI, M. I.

"Experimental Plague in Different Populations of the Small Suslik."

Tenth Conference on Parsitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Elistinskaya Anti-Plague Station

S.P. Sect. 1

Optics

535.375.54

7192. Raman effect in a crystal of heavy ice. E. F. Gross and B. I. Yakimov. *Dokl. Akad. Nauk SSSR*, 81, 761–3 (No. 5, 1951) *In Russian.*

Heavy ice has been found to yield Raman frequencies of 2690, 2500, 2445, 2150, 275, 256, 236, 218, 203 and 144 cm^{-1}. The 2445 frequency is not found in heavy water, nor in light water or light ice. In the low-frequency range, the line 203 is very prominent and corresponds undoubtedly with the 213 line of the light ice. This is borne out by calculation based on the assumption that the frequencies 203 and 213 are due to the translational vibrations of H_2O and D_2O molecules in the lattice of ice crystals. In the range 300–150 cm^{-1}, the squares of the ratios of corresponding frequencies of the H bond for crystals of D_2O and H_2O are approximately equal to the mass ratio $M_{H_2O} : M_{D_2O}$. F. LACHMAN

VAL'KOV, F.A. (g. Krasnodar).

Some experiments for the preparation of metals. Khim. v shkole 9 no.6:65-66 N-D '54. (MLRA 8:1)
(Metals)

VAL'KOV, F.A.; NESTERENKO, L.A.

Demonstration experiments with halogens. Khim.v shkole 14 no.5:53-55 S-O '59. (MIRA 12:12)

1. Pedagogicheskiy institut, Krasnodar.
(Halogens) (Chemistry--Experiments)

VAL'KOV, F.A.; NESTERENKO, L.A.

Properties of sulfur and its compounds. Khim. v shkole 16 no. 3:74-76 My-Je '61. (MIRA 14:5)

1. Pedagogicheskiy institut, Krasnodar.
(Sulfur)

VAL'KOV, Fedor Alekseyevich; LAPITSKIY, A.V., prof., red.; METEL'SKAYA, G.S., red.

[Inorganic chemistry] Neorganicheskaia khimiia. Moskva, Uchpedgiz, 1963. 483 p. (MIRA 17:4)

VALOV, G.M.

Problem on the equilibrium of a rectangular parallelepiped with mixed boundary conditions. Vest.Mosk.un.Ser.mat., mekh., astron., fiz., khim. 14 no.3:35-41 '59. (MIRA 13:5)

1. Kafedra teorii uprugosti Moskovskogo gosudarstvennogo universiteta.
(Elastic plates and shells) (Parallelepiped)

VAL'KOV, G

Organizatsiya gruzovykh rabot (Organization of loading work) Zadachi i primery ekspluatatsionnykh raschetov. Moskva, Rechizdat, 1952. 286 p. illus , diagrs., tables.
"Spisok ispol'zobannoy Literatury": p. 271-(272)

N/5
756.545
.V9

VAL'KOV, Grigoriy Petrovich; KAZANTSEV, A.M., dotsent, kand.tekhn.nauk, retsenzent; POSTNIKOV, S.A., inzh., retsenzent; RZHECHITSKIY, B.D., inzh., red.; MAKHUSHINA, A.N., red.izd-va; BOBROVA, V.A., tekhn.red.

[Organization and mechanization of cargo operations] Organizatsiia i mekhanizatsiia gruzovykh rabot. Moskva, Izd-vo "Rechnoi transport," 1959. 388 p. (MIRA 12:4)
(Cargo handling)

VAL'KOV, G.P., kand.tekhn.nauk; SHUMKOV, Ye.B., inzh.

Automatic control of belt conveyors. Mekh.i avtom.proizv. 16 no.7:13-15 Jl '62. (MIRA 15:8)
(Conveying machinery) (Automatic control)

VAL'KOV, G.P., kand.tekhn.nauk; SHUMKOV, Ye.B., inzh.

Speed relay with two limits. Mekh. i avtom. proizv. 17 no. 3: 36-37 Mr '63. (MIRA 17:9)

VAL'KOV, Grigoriy Petrovich. Prinimali uchastiye: KAZAKOV, A.P., kand. tekhn. nauk, dots.; GNOYAN, A.A., inzh.; MOROZOV, N.P., inzh.; ARTAMONYCHEV, A.N., kand. tekhn. nauk, retsenzent; MARFENIN, N.V., inzh., retsenzent; RZHECHITSKIY, B.D., red.; MAKRUSHINA, A.N., red.

[Organization of cargo handling; problems and examples] Organizatsiia gruzovykh rabot; zadachi i primery. Moskva, Transport, 1965. 299 p. (MIRA 18:6)

KRADZIEV,B., prof.; LAZAROV,B.; RAJCEV,I.; VALKOV,I.

On some morphological changes in the kidney in multiple myeloma. Nauch. tr. vissh. med. inst. Sofiia 42 no.4: 13-20 '63

1. Aus dem Institut fur Pathologische Anatomie (Direktor: Prof. B.Kardziev), Medizinisches Institut in Sofia.

SAL'NIKOV, V., inzh.; DOLGOV, V., inzh.; DUDNIKOV, V.; CHUVANOV, V.; VAL'KOV, K.

Exchange of experience. Avt.transp. 42 no.12:49-51 D '64. (MIRA 18:4)

VAL'KOV, K. I.

VAL'KOV, K. I. --"Problems of Utilization of Collinear Transformations in Descriptive Geometry Problems," (Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min of Higher Education USSR, Leningrad Order of Labor Red Banner Engineering Construction Inst, Leningrad, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

* For Degree of Candidate in Technical Sciences

VAL'KOV, K.I., kand.tekhn.nauk

Tranformations of projection. Shor. nauch. trud. LISI no.3:208-228 '59. (MIRA 13:7)

(Geometry, Projective)

L 7713-66 EWP(j)/T RM

ACC NR: AP6000907 SOURCE CODE: CZ/0043/65/000/001/0003/0012

AUTHOR: Vulko, L. (Candidate of sciences)(Bratislava)

ORG: Department of Physical Chemistry, Slovak Technical University, Bratislava (Katedra fyzikalnej chemie Slovenskej vysokej skoly technickej)

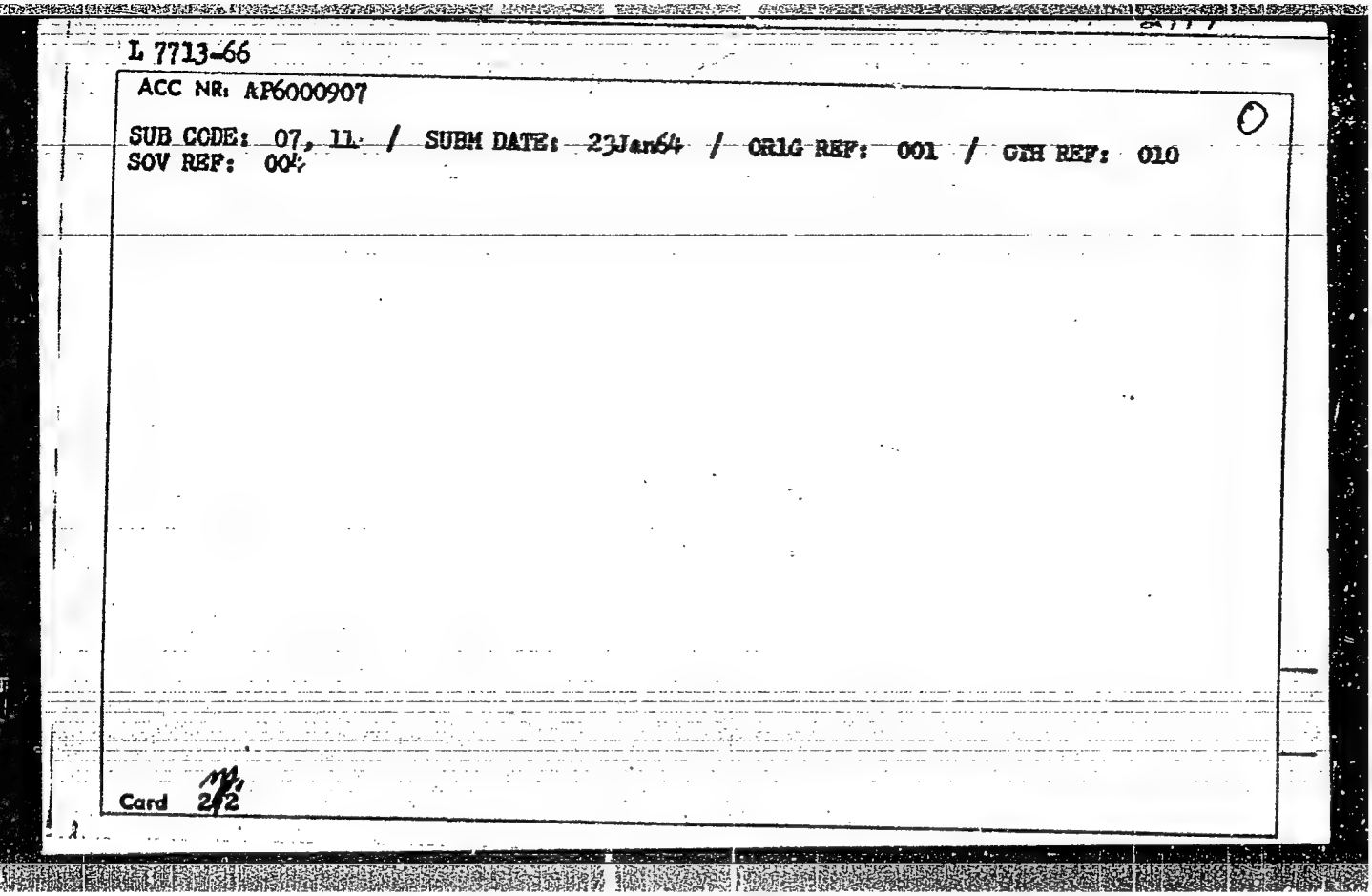
TITLE: Thermodynamic conditions at equilibrium of chemical and mechanical energies

SOURCE: Chemicke zvesti, no. 1, 1965, 3-12

TOPIC TAGS: polymer, polymer physical chemistry, chemical equilibrium, thermochemistry

ABSTRACT: The condition for the equilibrium between chemical and mechanical energy was established by Tykodi's method, for a polymer substance forming a filament or a film in contact with the liquid or vapor phase of a low molecular weight polar substance, that is causing breaking of the polymer's chains. The solution of the problem is based on replacement of the complicated mechanism of the interaction of the polymer with the polar substance which releases the mechanical energy by a specific external field of force, whose potential is mainly a function of the physicochemical character of the corresponding components. This potential equals the elastic free energy of the component. The author thanks Prof.-Dr. V. Kello for the careful proofreading and for the comments to the work. Orig. art. has: 1 figure, 30 formulas. [JPRS]

Card 1/2



L 7713-66

ACC NR: AP6000907

SUB CODE: 07, 11 / SUBM DATE: 23Jan64 / ORIG REF: 001 / OTH REF: 010

SOV REF: 004

Card 2/2

AUTHORS: Petrovskiy, I. Ya.; Valkov, L. V. 52

TITLE: Causes of incomplete detonation of explosive in shot holes

SOURCE: Teoriya vzry*vchaty*kh veshchestv, sbornik statey, 1963, 474-495

TOPIC TAGS: explosive , blasting in coal mines, shot hole, detonation front, ammonite, pobedit, permissible explosive

ABSTRACT: Authors discuss some of the reasons as to why incomplete detonations occur in charges used in shot holes. They state that one of the basic causes for incomplete detonation is the presence of a radial or side gap between the sticks and sidewalls of the shot hole. The products of the blast, moving along this gap, lead the detonation front and condense the explosive in front of it, which, during the blasting process, can lead to a loss in the detonation capability of the charge. Authors conclude that

Card 1/2

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the basic trends in combatting incomplete detonation in charges used in ... pine shot holes should be: (1) elimination of the radial gap between the side walls of the stick and walls of the shot hole, this being accomplished by cutting and mashing the sticks into the shot hole during its packing, and, in the future by a mechanical method of packing the shot holes; (11) a better cleaning ... of the shot hole from drilling dust; and (111) the ... explosives ... tests ... stability of ... the detonation properties of ... shot holes on the basis of findings obtained ... for transmission of detonation in open air ... Orig. art. has: 4 figures and 5 tables

ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 14Jun63	ENCL: 00
SUB CODE: PH	NO REF SOV: 006	OTHER: 003

Card 2/2

(SOV/177-58-9-23/51

AUTHOR: Val'kov, M.I., Lieutenant-Colonel of the Medical Corps

TITLE: Experience in Applying Biomycin Ointment in Certain Forms of Pyoderma

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 9, pp 73-74 (USSR)

ABSTRACT: The author treated 76 patients suffering from impetigo, streptoderma, pyococcic ulcers, balanoposthitis and sycosis with biomycin ointment. The basic substance of the ointment consists of vaseline with lanolin in different doses. The ointment is prepared at 5000 un. of the biomycin preparation on 1 g of the basic substance. The patients endured the ointment very well, and in most cases a quick healing effect was obtained. Two case reports are given.

Card 1/1

VAL'KOV, M.I. (Tallin).

Myxedema nodosa. Vest.derm. i ven. 32 no.5:71 S-O '58 (MIRA 11:11)
(MYXEDEMA)

VAL'KOV, N.

POLYAKOV, I.; POZDNYAKOV, N.; KARMPOV, A.; STARIKOV, I.; DZIBOV, V.; VAL'KOV, N.

Uniformity and improvement of short-term credit and payments. Den. i kred. 16 no.5:11-25 My '58. (MIRA 11:6)
(Credit) (Payment)

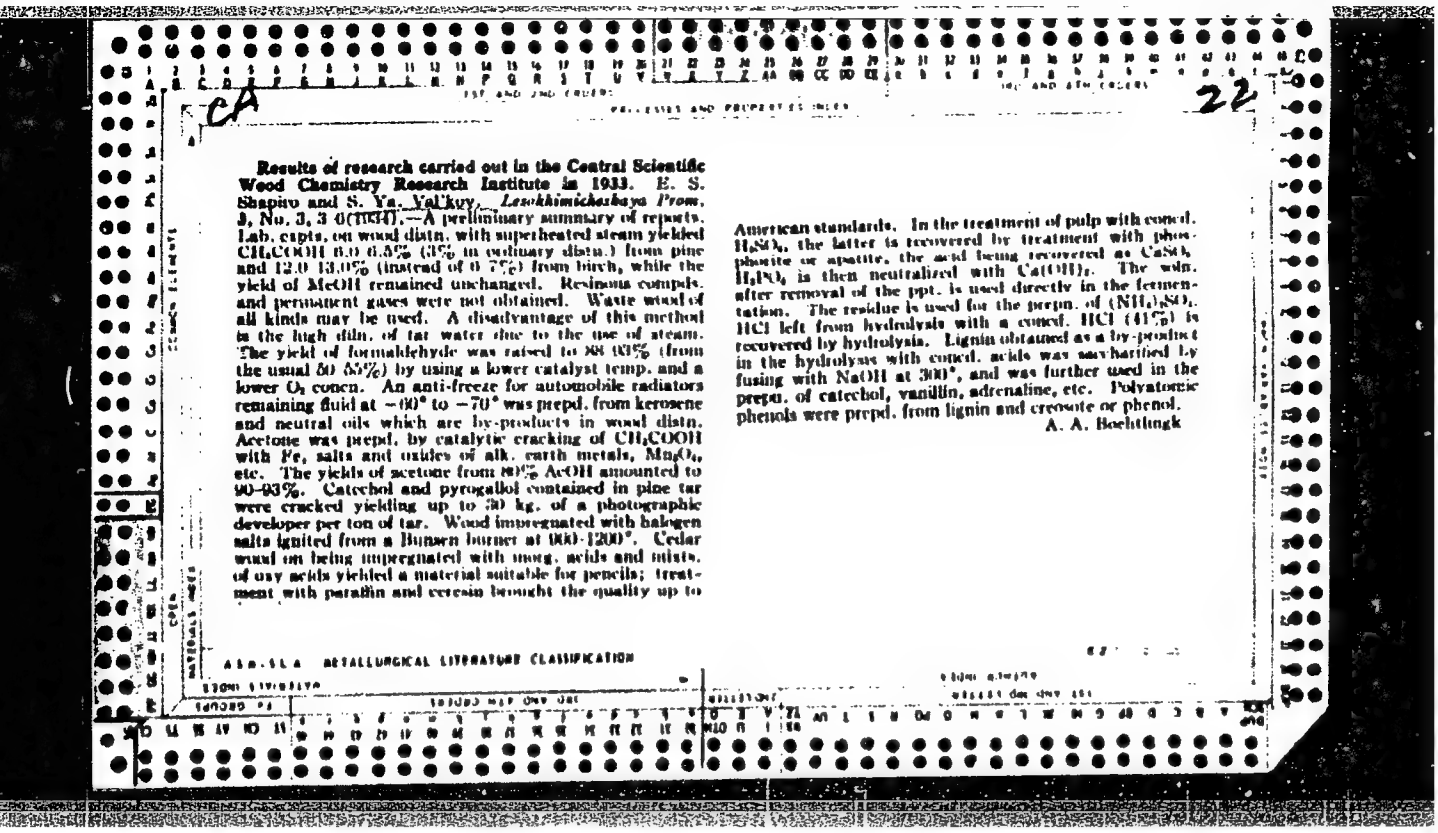
VAL'KOV, Nikolay Aleksandrovich; GUREVICH, G.Ye., red.; ALEKSANDROV, L.A., red. izd-va; LAVRENOVA, N.B., tekhn. red.

[Planning and records of cargo operations in seaports] Planirovanie i uchet gruzovykh rabot morskogo porta. Moskva, Izd-vo "Morskoi transport," 1958. 141 p. (MIRA 11:10)
(Cargo handling) (Harbors)

VAL'KOV, N.A., inzhener; USMINSKIY, A.N., inzhener.

Handling packaged freight in Leningrad harbor. Mekh. trud. rab. 10 no.9:38-40 S '56. (MLRA 9:10)

(Leningrad--Loading and unloading)



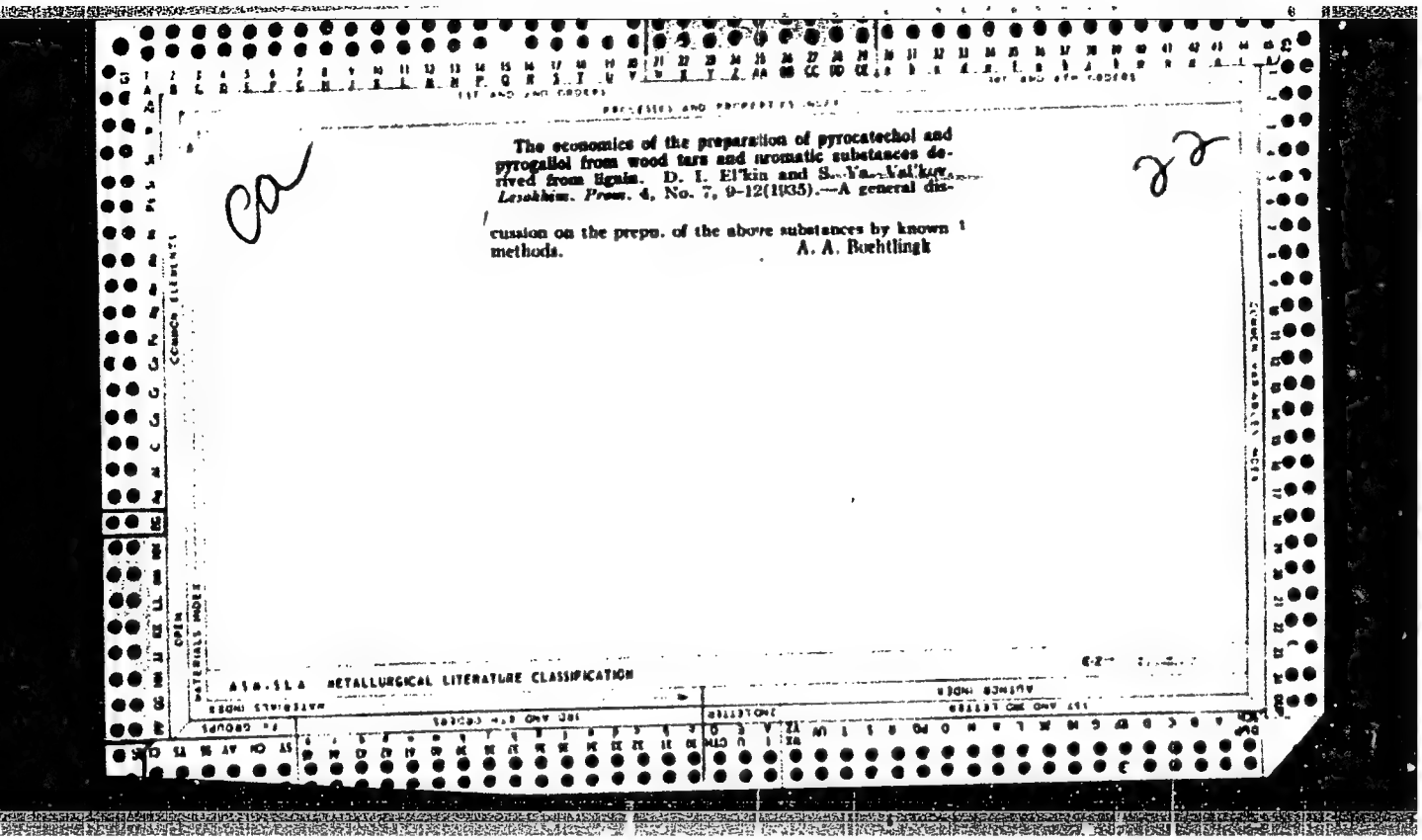
CA

22

Results of research carried out in the Central Scientific Wood Chemistry Research Institute in 1933. E. S. Shapiro and S. Ya. Yel'kuy. *Lesokhimicheskaya Prom.*, 3, No. 3, 3–6(1934).—A preliminary summary of reports. Lab. expts. on wood distn. with superheated steam yielded CH_3COOH 6.0–6.5% (3% in ordinary distn.) from pine and 12.0–13.0% (instead of 6.7%) from birch, while the yield of MeOH remained unchanged. Resinous compds. and permanent gases were not obtained. Waste wood of all kinds may be used. A disadvantage of this method is the high dilu. of tar water due to the use of steam. The yield of formaldehyde was raised to 88–93% (from the usual 50–55%) by using a lower catalyst temp. and a lower O_2 concn. An anti-freeze for automobile radiators remaining fluid at −60° to −70° was prepd. from kerosene and neutral oils which are by-products in wood distn. Acetone was prepd. by catalytic cracking of CH_3COOH with Fe, salts and oxides of alk. earth metals, Mn_3O_4, etc. The yields of acetone from 80% AcOH amounted to 90–93%. Catechol and pyrogallol contained in pine tar were cracked yielding up to 30 kg. of a photographic developer per ton of tar. Wood impregnated with halogen salts ignited from a Bunsen burner at 900–1200°. Cedar wood on being impregnated with inorg. acids and mixts. of oxy acids yielded a material suitable for pencils; treatment with paraffin and ceresin brought the quality up to American standards. In the treatment of pulp with concd. H_2SO_4, the latter is recovered by treatment with phosphorite or apatite, the acid being recovered as $CaSO_4$. H_3PO_4 is then neutralized with $Ca(OH)_2$. The soln. after removal of the ppt. is used directly in the fermentation. The residue is used for the prepn. of $(NH_4)_2SO_4$. HCl left from hydrolysis with a concd. HCl (41%) is recovered by hydrolysis. Lignin obtained as a by-product in the hydrolysis with concd. acids was carbonized by fusing with NaOH at 300°, and was further used in the prepn. of catechol, vanillin, adrenaline, etc. Polyatomic phenols were prepd. from lignin and creosote or phenol.

A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The economics of the preparation of pyrocatechol and pyrogallol from wood tars and aromatic substances derived from lignin. D. I. El'kin and S. Ya. Val'kov. *Leskhim. Prom.* 4, No. 7, 9–12(1935).—A general discussion on the prepn. of the above substances by known methods. A. A. Boehtlingk

KHMEL'NITSKAYA, Ye.L., prof., doktor ekon. nauk; VOLKOV, M.Ya., kand. ekon. nauk; BEL'CHUK, A.I., kand. ekon. nauk; IORDANSKAYA, E.N., ml. nauchn. sotr.; MENZHINSKIY, Ye.A.; PAVLOVA, M.A., kand. ekon. nauk; VASIL'KOV, N.P., kand. ekon. nauk; ARDAYEV, G.B., kand. ekon. nauk; VAL'KOV, V.A., kand. ekon. nauk; TIMASHKOVA, O.K., kand. ekon. nauk; ANDREYEV, Yu.K., ml. nauchn. sotr.; PUSHKIN, A.A., ml. nauchn. sotr.; MAKSIMOVA, M.M., kand. ekon. nauk; KIRSANOV, A.V., kand. ekon. nauk; SHEBANOV, A.N., ml. nauchn. sotr.

[Changes in the economic structure of the countries of Western Europe] Izmeneniia v ekonomicheskoi strukture stran Zapadnoi Evropy. Moskva, Nauka, 1965. 433 p. (MIRA 18:9)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy.

AUTHORS: Byalobzheskiy, A. V., Val'kov, V. D. SOV/89-5-1-7/28

TITLE: A Method of Determining the Number of Decelerated Electrons and the Absorbed Energy of a Monoenergetic Electron Beam (Metod opredeleniya kolichestva zaderzhannykh elektronov i pogloshchennoy energii monoenergeticheskogo elektronnogo puchka)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 1, pp. 68-69 (USSR)

ABSTRACT: A method was worked out for the purpose of measuring the number of fast electrons held back in the various domains of a system. This is necessary in order to be able to take the influence exercised by electrochemical phenomena (as e.g. the polarization of electrodes) into account. Experimentally such coefficients were measured as are necessary for solving the system of equations which was set up theoretically. The experimental structure consists of 6 aluminum disks which are insulated from one another by means of mica of 10 μ thickness. The plates are fastened to a common conductor. A parallel electron beam having a cross section of exactly 1 cm^2 incides upon the first Al plate. By varying the manner of connecting the measuring apparatus with the terminals of the aluminum disks direct measurement of the

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number of electrons held back in the various plates is made possible. On the strength of the data obtained by means of experiments the following curves were plotted:
The dependence:
1.) of electron absorption
2.) of the average energy of the electrons, and
3.) of the intensity of the electron beam
upon the thickness of the absorbed layer.
There are 2 figures.

SUBMITTED: December 26, 1957

1. Electron beams--Energy 2. Electrons--Absorption 3. Electron beams--Intensity 4. Electron beams--Testing equipment

85822

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S/123/60/000/021/001/001
A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 21, p. 29, # 115390

AUTHORS: Byalobzheskiy, A. V., Val'kov, V. D.

TITLE: The Method of Corrosion and Electrochemical Investigations of Metals in a Liquid Stream Under the Action of Ionizing Radiation

PERIODICAL: Tr. In-ta fiz. khimii. AN SSSR, 1959, No. 7, pp. 119-132

TEXT: The method and the apparatus are described for corrosion and electrochemical investigations of metals in an electrolyte stream under the effect of an ionizing radiation. The methods are presented for determining the overcurrent speed, the electron absorption, the energy of emission, and the temperature of the solution in the irradiation zone. The action mechanism is stated of the electron radiation of 2.10^{20} ev/cm^2 sec intensity upon the corrosion of Al in a 3%-NaCl-solution. The heating of the electrolyte and the metal due to their absorption of radiation energy furthers the breaking up of the forming film. The interaction of the noted factors leads to the localization of the corrosion pits of Al. The in-

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The Method of Corrosion and Electrochemical Investigations of Metals in a Liquid Stream Under the Action of Ionizing Radiation

vestigation of the radiation effect on the corrosion behavior of the pairs Zr-Al and Ti-Al in a 30%-HNO_3-solution showed that the electron radiation considerably increases the corrosion current of the pairs mentioned. For the Zr-Al-pair, the increase of the corrosion current to a considerable extent is caused by the durable changes developing in the irradiated system and exerting their action also after stopped irradiation. There are 18 figures and 11 references.

M. G. N.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/081/60/000/016/006/012
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 16, p. 162, # 65246

AUTHOR: Val'kov, V.D.

TITLE: An Apparatus for Corrosion and Electrochemical Measurements on a Rotating Electrode Under Radiation

PERIODICAL: Tr. In-ta fiz. khimii, AN SSSR, 1959, No. 7, pp. 139-140

TEXT: The apparatus is made of glass. The basic and auxiliary containers are separated by a polished section. The maintenance of constant temperature of the electrolyte is accomplished with the aid of a spiral tube soldered into the lid; in the spiral circulates a liquid supplied from an ultrathermostat. The sample is ground into a rotating glass tube and fastened to it with bakelite glue. The tube is equipped with a bell used for the hydraulic sealing. Special inlet conductors are intended for gas feed and measurement of the electrode potential. The revolutions of the sample are counted by a tachogenerator fastened to the motor axle. The constancy of the revolution number is maintained by a rheostat

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S/081/60/000/016/006/012
A006/A001

An Apparatus for Corrosion and Electrochemical Measurements on a Rotating Electrode Under Radiation

connected in series to the feed circuit of the electric motor. The irradiation of the sample is performed through the container bottom, made in the form of a thin ($\sim 150\mu$) membrane.

V. Val'kov

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

28 (5)

AUTHORS: Tomashov, N. D., Byalobzheskiy, A. V., SOV/32-25-6-31/53
Val'kov, V. D., Zalivalov, F. P.

TITLE: Device for the Rapid Determination of the Quality of Anodic Oxide Films on Aluminum and Its Alloys (Pribor dlya bystrogo opredeleniya kachestva anodnykh okisnykh plenok na alyuminii i yego splavakh)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 6, pp 738-739 (USSR)

ABSTRACT: For the detection of defective parts of anodic films the device K-1 by G. V. Akimov and Ye. N. Paleolog is usually used. The device permits the detection of very small defects, does, however, not indicate the general quality of the film; another disadvantage is the use of a sodium chloride solution which may lead to a corrosion of the film. Therefore, a new device was designed, K-2 - very similar to K-1; the mode of operation of the new device is based upon the fact that the conductivity of the anodic oxide film is the greater the more porous it is. The construction of the detector of defects (Fig 1) is somewhat modified, stainless steel 1 Kh18N9 or zink serve e. g. as electrode as copper and aluminum may together form an electric cell. Th' device

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Device for the Rapid Determination of the Quality of Anodic Oxide Films on Aluminum and Its Alloys

SOV/32-25-6-31/53

(Fig 2, Scheme) has piles as direct-current transmitters (2-4 v) so that a non corroding electrolyte may be used (0.1 % solution of potassium- or sodium bichromate). There are 2 figures.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences, USSR)

Card 2/2

83562

S/020/60/134/001/014/021
B004/B060

5.4600

AUTHORS: Byalobzheskiy, A. V., Val'kov, V. D.

TITLE: The Influence of Semiconductor Properties of Oxide Films on the Electrochemical Behavior of Metals in Electrolytes Under the Action of Ultraviolet Light

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 1, pp. 121 - 124

TEXT: The authors proceed from a paper by V. I. Veselovskiy (Ref. 1) who noted that oxide films bear an influence on the electrochemical behavior of metals under UV-light irradiation, but studied these effects on anodic processes only. The authors found that in some metals photoelectrochemical processes arise only in the range of cathodic polarization. Table 1 supplies experimental data for Ti/TiO_2; Ni/NiO; Cu/Cu_2O; Cd/CdO. The results are: 1) The direction of the shift of the metal potential under the action of UV-light depends on the type of conductivity of the oxide film. In n-type oxide films

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The Influence of Semiconductor Properties of Oxide Films on the Electrochemical Behavior of Metals in Electrolytes Under the Action of Ultraviolet Light

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the potential shifts toward more negative values, while in the case of p-type oxide films it shifts toward more positive values. 2) An increase in the oxide film thickness increases this effect. An exception is given by Cd/CdO which exhibits photoeffects both with anodic and cathodic polarization, and which requires further investigations. Since the variation of the oxygen concentration in the solution bears an influence on the photoeffect, the authors assumed that the potential shifts under the action of UV-light are to be explained by a variation in the adsorption properties of the oxide film for oxygen and, perhaps, also for water. Fig. 1 shows the photoeffects of the metal-metal oxide electrodes investigated. The two photoeffects occurring with copper are explained, as to the first effect, by the reaction $2Cu + 2OH^- \rightleftharpoons Cu_2O + H_2O + 2e^-$, and as to the second effect, by the reaction $Cu_2O + 2OH^- + H_2O \rightleftharpoons Cu(OH)_2 + 2e^-$. In the case of Ta/Ta_2O_5 in 0.5 N H_2SO_4, the photocurrent varies with increasing thickness d of the oxide film. Three sections must be distinguished (Fig. 2). Section I is not treated by the authors, as it requires closer studies. In section II, I_{ph} increases with d:

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The Influence of Semiconductor Properties of Oxide Films on the Electrochemical Behavior of Metals in Electrolytes Under the Action of Ultraviolet Light

S/020/60/134/001/014/021
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$I_{ph} = en_d \alpha$ (1) (e - electron charge, n_d - total number of current carriers, α - coefficient of carrier production on the surface), or, in agreement with Ref. 4: $I_{ph} = An[1 - \exp(-BV)]$ (3) (A,B = constants). Equation (3), however, holds only as long as a value d_{max} is not attained. On a further increase of d there forms a layer d_1 of high resistance, I_{ph} becomes smaller and then obeys equation (4): $I_{ph} = k\eta V$, where η is a coefficient which reproduces the voltage drop in d_{max}. There are 2 figures, 1 table, and 4 references: 2 Soviet, 1 US, and 1 British.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: April 28, 1960, by A. N. Frumkin, Academician

SUBMITTED: April 8, 1960

Card 3/3

S/089/61/010/005/012/015
B102/B214

21.4210

AUTHORS: Byalobzheskiy, A. V., Val'kov, V. D.

TITLE: Investigation of the corrosion of metals in the experimental hole of the ИРТ(IRT) reactor

PERIODICAL: Atomnaya energiya, v. 10, no. 5, 1961, 525-528

TEXT: The behavior of the corrosion couples Zr - Al, Zr - Fe, and Fe-Al in 0.5 N solution of NaCl has been investigated for a thermal neutron flux of $\sim 2 \cdot 10^{12}$ n/cm^{2}sec at the IRT reactor of the ordena Leninа Institut atomnoy energii im. I. V. Kurchatova (Lenin Order Institute of Atomic Energy imeni I. V. Kurchatov). The metal mentioned first was used as the cathode. (V. V. Goncharov reported on the method of corrosion couples at the Second Atomic Conference at Geneva in 1958). The cell used for the investigations is shown in Fig. 1. The metals investigated had the form of wire spirals and equal surface areas of 3.5 cm^2. The time dependence of the current density and the electrolyte temperature were measured during heating in the reactor and during cooling outside it. It was

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observed in all cases that the current density first increased (almost linearly) on heating in the reactor, then remained constant for a shorter or longer interval, and finally (after 20 minutes the sample was taken out of the reactor) fell exponentially. The couple Fe-Al showed the highest increase of the current density. All curves were obtained also in control experiments in which there appeared, particularly in the Zr-Fe couple, significant deviations which can be attributed to the effect of the radiolysis products of water. Fig. 3 shows the polarization curves for the electrodes of the corrosion couples investigated. In the radiolysis of aqueous solutions HO, HO_2, and H_2O_2 were found to act as depolarizers. The interaction of the electrode substance with the products of radiolysis can, for example, be described for the couple Zr-Fe by the following mechanism: The iron is the anode and goes in solution: $Fe \rightarrow Fe^{2+}+2\bar{e}$; on account of the interaction the divalent ion goes over into the trivalent ionized one:

$$Fe^{2+}+OH \rightarrow Fe^{3+}+OH^-;$$
$$2Fe^{2+}+3H_2O_2 \rightarrow 2Fe^{3+}+2H_2O+2OH^-+O_2;$$
$$2Fe^{2+}+2HO_2 \rightarrow 2Fe^{3+}+2OH^-+O_2.$$

Investigation of the corrosion of metals...

The trivalent ionized iron is, however, a good depolarizer: $Fe^{3+} + \bar{e} \rightarrow Fe^{2+}$. This also explains the corroding effect (25-30 %) of iron ion in Zr - Fe couple. The authors thank Yu. F. Chernilin for help in experiments. There are 3 figures, 1 table, and 3 Soviet-bloc references.

SUBMITTED: October 29, 1960

Legend to Fig. 1: 1) zirconium screw, 2) and 4) samples; 3) copper constantan thermoelement with thin polystyrene coating, 5) polystyrene stopper, 6) electrolyte level, 7) polystyrene case

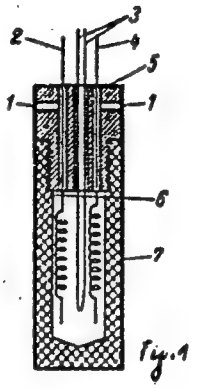
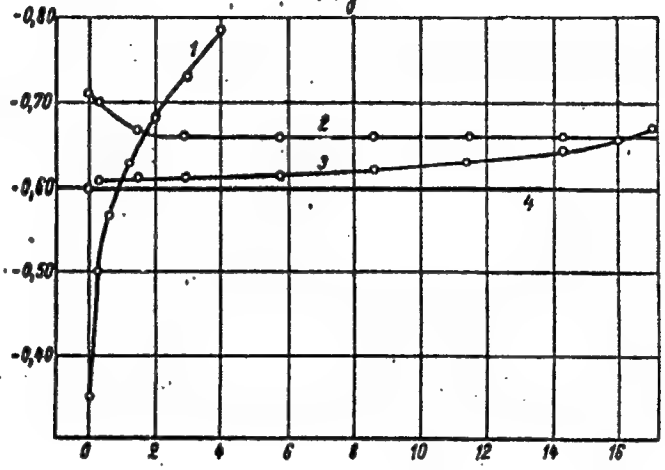


Fig. 1

Investigation of the corrosion of metals...

Fig. 3



Legend to Fig. 3: Cathode and anode polarizations of the metals in 0.05 N NaCl at 25°C; 1) cathode polarization of Zr, 2) anode polarization of Al, 3) cathode polarization of Fe, 4) anode polarization of Fe; ordinate: potential (in volts) referred to saturated KCl; abscissa: current density (in $\mu a/cm^2$).

Card 4/4

TOMASHOV, N.D.; BYALOBZHESKIY, A.V.; IGNATOV, N.N.; VAL'KOV, V.D.

Weakly corrosive electrolytes for anodization of large surfaces and parts with complex configurations. Zhur. prikl. khim. 34 no.5:1072-1077 My '61. (MIRA 16:8)

(Protective coatings) (Electrolytes)

VALKOV, V. D.

90

PHASE I BOOK EXPLOITATION

SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR, 1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

Card 1/14

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The Effect of Nuclear Radiation (Cont.) SOV/6176

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research orginization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ-radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

Card 2/14

AUTHOR: Val'kov, V. I.; Dyel'tsevskiy, A. V.

TITLE: Mechanism of change in rate of electrode reactions under the effect of electron irradiation

SOURCE: Zhurnal fizicheskoy khimii, v. 37, no. 6, 1963, 1205-1212

TOPIC TAGS: electrode reaction rate, electron irradiation, ionizing radiation, radiolysis product, polarization, electrochemical behavior

ABSTRACT: It has been shown that ionizing radiation causes two types of effects: 1) radiation-electrochemical, when the change in rate of the electrodic reaction is [illegible] the appearance [illegible] considerably lowers this effect. The semiconductor nature of these [illegible] the electrochemical behavior of the metal in the radiation process.

Card 1/2

L 12696-63
ACCESSION NR: AP3002923

electrodes with n-type films, the photoelectrochemical effect appears only on anodic polarization and with films of the p-type only on cathodic polarization. This effect increases with the [illegible] of the oxide films. [illegible] figures and 1 table.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (Institute of Physical Chemistry, Academy of Sciences SSSR)

SUBMITTED: 19Nov60 DATE ACQ: 16Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 017 OTHER: 004

Card 2/2

L 5457-66 EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)

ACC NR: AT5023815 IJP(c) MJW/JD/RW/ SOURCE CODE: UR/0000/62/000/000/[illegible]

JG/WB/GG/GS

AUTHOR: Byalobzheskiy, A. V.; Val'kov, V. D.; Lukinskaya, V. N.

ORG: none

TITLE: Effect of irradiation on the corrosion behavior of metals and alloys

SOURCE: Soveshchaniye po probleme deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 332-340

TOPIC TAGS: irradiation, ionizing irradiation, corrosion, metal corrosion, alloy corrosion, irradiation induced corrosion

ABSTRACT: The corrosion behavior of metals and alloys irradiated with x-rays, gamma rays, and fast electrons has been investigated. It was found that irradiation increases the atmospheric corrosion of iron, copper, and zinc much more than that of aluminum, but has no effect on stainless-steel corrosion. Gamma-rays sharply increase the corrosion of metals in carbon tetrachloride: the corrosion rate of copper reaches 2.35 g/m^2 per hour; of steel 3, 1.54 g/m^2; of stainless 1Kh18N9T steel, 1.14 g/m^2; of monel metal, 1.05 g/m^2; and of stainless Kh18N12MZT steel, 0.79 g/m^2. Only the corrosion rates of aluminum, zirconium, and especially titanium were not increased significantly by irradiation. It has also been observed that

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ionizing radiation increases the corrosion of metals, particularly in a damp atmosphere, in a carbon tetrachloride medium, and under various conditions of contact between dissimilar metals. Corrosion induced by radiation greatly depends upon the electrochemical radiation effect, inasmuch as the new substances formed during the radiolysis of the corrosive medium are strong cathodic or anodic depolarizers. Particularly effective are the products of water radiolysis, such as H_2O_2, and also OH and HO_2, which substantially facilitate the cathodic process. Whenever metal has an oxide film, the radiation may also produce a photoelectrochemical effect; in this case the number of charge carriers in the film increases during the absorption by the film of the energy of irradiating particles. This effect is observed only in a certain range at potentials for each individual metal, and is associated with the conductivity of the oxide film. As a rule, the effect is weak and is considerably weaker than the electrochemical radiation effect. Orig. art. has: 7 figures and 2 tables.

[ND]

SUB CODE: MM, NP/ SUBM DATE: 18Aug62/ ORIG REF: 010/ OTH REF: 001/ ATD PRESS: 4134

Card 2/2 mk

VAL'KOV, V. F., Cand Biol Sci -- (diss) "Utilization of pre-Caucasus chernozems of the Krasnodar Krey for fruit plantings." Rostov-na-Don, 1960. 15 pp; (Rostov-na-Don State Univ); 150 copies; price not given; (KL, 23-60, 122)

VAL'KOV, V.F.

Establishing soil groups in Krasnodar Territory for agricultural purposes. Pochvovedenie no.3:71-76 Mr '63. (MIRA 16:3)

1. Yuzhnyy filial "Rosgiprozem".
(Krasnodar Territory—Soils)

(2)

Vibrations of the hydrogen bond and its Raman spectrum. B. F. Gross and V. I. Val'kov (State Univ., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 67, 619-22 (1949); cf. *C.A.* 45, 451c.—Water, alcs., acids, and hydrate salts show absorption bands at 3000–3200 cm.$^{-1}$, a strong band near 175 cm.$^{-1}$, and a weaker very broad band at 350–1000 cm.$^{-1}$. The latter has max. at 300, 500, and 750 cm.$^{-1}$. The 175-cm.$^{-1}$ band is interpreted to represent the intermol. vibration of the OH group and the O of the H bond O—H. The vibration has a low frequency owing to the low bond energy (about 6 cal./mole). The potential-energy curve of the system, as calcd. by Stepanov (*C.A.* 40, 2740^{i}; 41, 2334^{i}) shows a flat min. (2000 cm.$^{-1}$), a large equil. distance (1.63 A.), and a tremendous anharmonicity. On this same basis the band max. at 175, 300, 500, and 700 for H_2O and at 170, 350, and 500 for D_2O are interpreted as fundamental, 1st, 2nd and 3rd overtones of this vibration. Two new bands for gypsum at 180 and 210 cm.$^{-1}$ are due to this motion. The frequency shift of the free OH motion from 3650 cm.$^{-1}$ by 200–400 cm.$^{-1}$ in the H-bonded state also seems to correlate with the fundamental or an overtone frequency of the 175-cm.$^{-1}$ vibration.

H. D. Noether

Phys. Inst.

VAL'KOV, V. I.

USSR/Physics - Spectra, Dispersion 21 Sep 49
Hydrogen Bond, Vibration

"The Vibration Spectrum of the Hydrogen Bond," Ye. F. Gross, Corr Mem, Acad Sci USSR, V. I. Val'kov, Phys Inst, Leningrad State U imeni A. A. Zhdanov, 4 pp

"Dok Ak Nauk SSSR" Vol LXVIII, No 3

Extends authors' article in "Dok Ak Nauk SSSR" Vol LXVII, No 4, 1949. Authors consider vibrations of hydrogen bond as valence vibrations. Studied dispersion spectra of several crystals containing water of crystallization: gypsum $CaSo_4 \cdot 2H_2O$, alum $KAl(SO_4)2 \cdot 12H_2O$, and magnesium chloride $MgCl_2 \cdot 6H_2O$.

Submitted 22 Jul 49

PA 149T102

CA

3

Wings of the Rayleigh line and the hydrogen bond. K. P. Gross and V. I. Val'kov. *Doklady Akad. Nauk S.S.S.R.* 68, 1013-16(1949).—Contrary to M. I. Batuev's (*C.A.* 41, 6184*b*) opinion that all frequencies between a few and over 200 cm.$^{-1}$ are due to vibrations of entire groups RO...HR$_1$, linked by a hydrogen bond O...H, and that such frequencies should be the closer to the Rayleigh line, the heavier R and R$_1$, the point of view is put forward that only frequencies around 200 cm.$^{-1}$ correspond to vibrations of the hydrogen bond as a whole, i.e., to vibrations involving the center of gravity of one O–H group and the other O atom. In support of this point of view, the frequency of the OH...O vibration remains unchanged when H is replaced by D, and is independent of the mol. wt. of R and R$_1$. In contrast to the ~200 cm.$^{-1}$ band, frequencies lying closer to the Rayleigh line are detd. by vibrations of whole mols. under the action of van der Waals forces. With HCO$_2$H, MeOH, etc., the low-frequency region close to the Rayleigh line is distinctly sepd. from the region 150-200 cm.$^{-1}$. In addn. to the evidence adduced previously (*C.A.* 44, 4375*b*), the Raman spectrum of cryst. HCO$_2$H, contg. no crystn. H$_2$O, shows, in the low-frequency region, the bands 57, 82, 117, 140, 170, 180, 194, 212, 234, 255 cm.$^{-1}$, clearly sepd. into 2 distinct groups. In the 2nd group, the bands at 212, 234, and 255 cm.$^{-1}$ are particularly intense, and these bonds only are attributed to the O...H bond. On fusion, the discrete bands form a broadly diffuse bond around 200 cm.$^{-1}$. From the Raman spectrum, the dissocn. energy of the hydrogen bond is 6.2 kcal./mole. The O...H vibrations in HCO$_2$H are very strongly anharmonic.

N. Thon

Val'kov, V. I.

Gross, E. F. and Val'kov, V. I. The vibration spectrum of the hydrogen bond. Pages 425 - 428.

Institute of Physics
The A. A. Zhdanov
Leningrad State Uni.

SO: Bulletin of the Academy of Sciences, Izvestia, (USSR) Vol. 14, No. 4. (1950) Series on Physics.

VAL'KOV, V. I.

PA 174T70

USSR/Physics - Spectrum, Oscillation 21 Sep 50
Bond, Hydrogen

"Oscillation Spectrum of the Hydrogen Bond," Ye. F. Gross, Corr Mem, Acad Sci USSR, V. I. Val'kov, Phys Inst, Leningrad State U imeni Zhdanov

"Dok Ak Nauk SSSR" Vol LXXIV, No 3, pp 453-456

Discusses small frequencies in dispersion spectrum of ice crystals. Assumes group of lines in combination-dispersion spectrum of matter with hydrogen bond, in 200/cm region, is caused by oscillations of H-bond. Submitted 18 Jul 50.

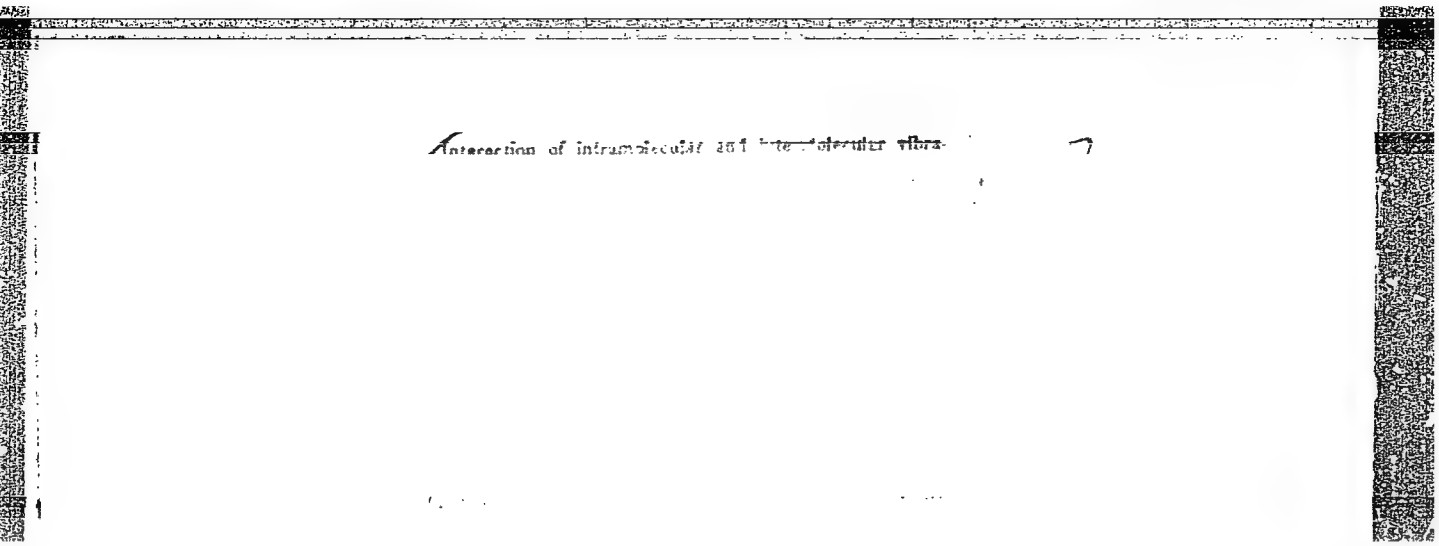
174T70

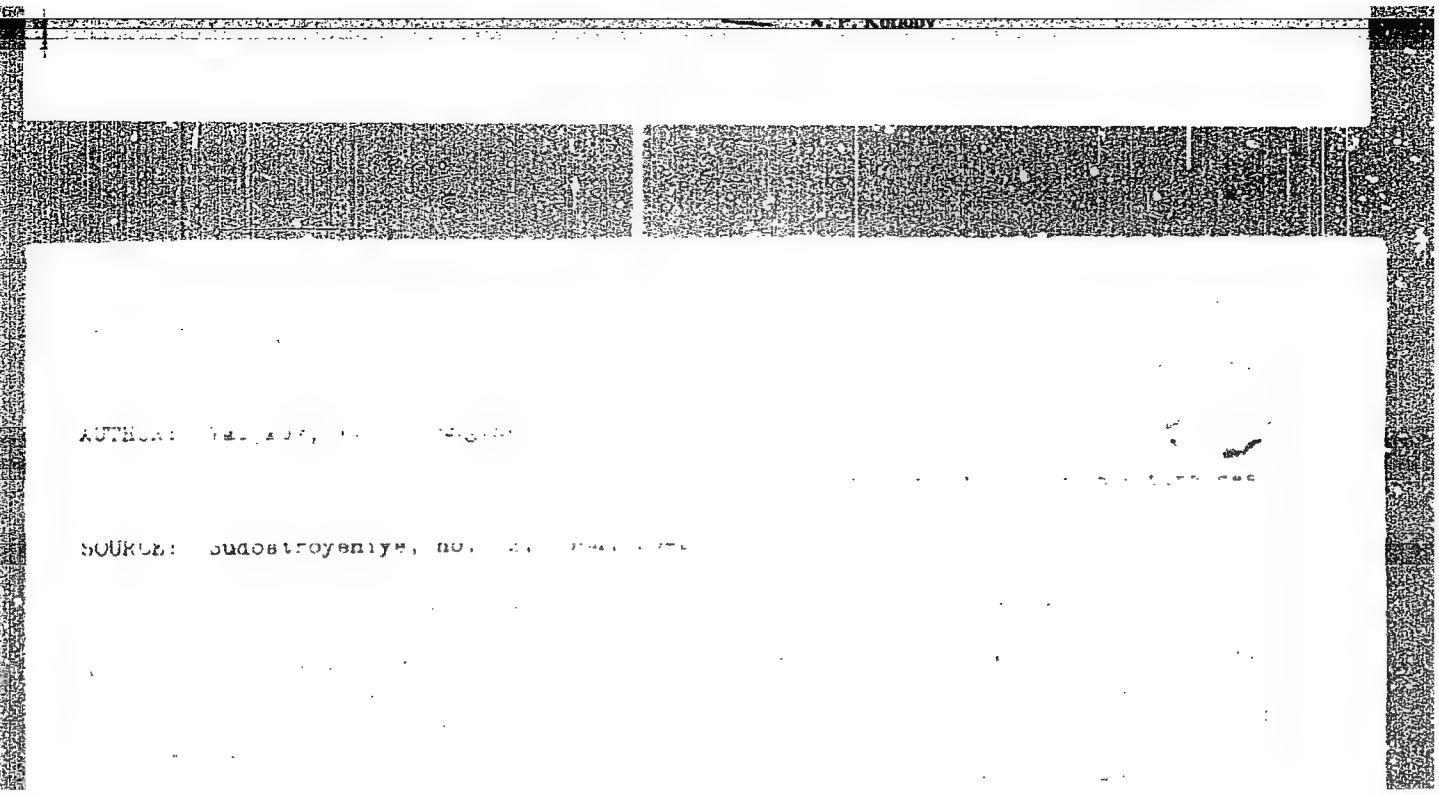
CA

3

Raman spectra of crystals of heavy ice. E. P. Gross and V. I. Val'kov (A. A. Zhdanov State Univ., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 81, 761-3(1951). -In 40-hr. exposure, the following frequencies were observed: 2500, 2001, 1445, 2330, 275, 256, 230, 218, 203, 166 cm.$^{-1}$. Owing to the short exposure, no lines could be identified with certainty in the 1233-cm.$^{-1}$ range of deformation vibrations of the D_2O mol., nor were any bands found at around 380 and 500 cm.$^{-1}$, observed in liquid D_2O. In the high-frequency group, the 2500 and 2330 cm.$^{-1}$ maxima are the most intense; the 2090 band is the least intense. All bands show hints of a finer structure. The 3445 max. is not observed in liquid D_2O, probably owing to fusion with the nearby 2500. In the low-frequency group, the 203-cm.$^{-1}$ band is very sharp and intense. The remaining lines are attributed to vibrations of the hydrogen bond in the D_2O crystal. That the 203 frequency of solid D_2O corresponds to the 213-cm.$^{-1}$ frequency of solid H_2O follows from $(203/213)^2 = 0.91$, as expected from $(\nu_{D_2O}/\nu_{H_2O})^2 = (M_{H_2O}/M_{D_2O})$, for translational vibrations. Analogous relations hold for the frequencies of the vibration spectrum of the hydrogen bond in the range 300–150 cm.$^{-1}$.

N. Thon





AUTHOR:

SOURCE: Sudostroyeniye, no.

Card 1/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001858510007-6"

transmissions) ν moving [illegible]

USSR / Physical Chemistry. Molecules. Chemical Bond. B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25809

Author : V.I. Val'kov, G.L. Maslenkova.
Title : Interaction of Intermolecular and Intramolecular Oscillations in Ice Crystal Spectrum.

Orig Pub : Optika i spektroskopiya, 1956, 1, No 7, 881-884.

Abstract : Lines of frequencies 230 (4), 291 (trace), 310 (0.5), 3088 (10), 3210 (1), 3321 (2) and 3400 (1,5) cm^{-1} were detected in the combination scattering spectrum of ice photographed at the temperature of liquid nitrogen. The lines 3088 and 3210 cm^{-1} were referred to the symmetric and asymmetric vibrations of the water molecule. The low frequencies were referred to the intermolecular vibrations of molecules connected by the hydrogen bond. The frequencies 3321 and 3400 were explained as combinations of frequencies of intramolecular and intermolecu-

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USSR / Physical Chemistry. Molecules. Chemical Bond. B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25809

Abstract : larvibrations, viz.: 3321 = 3088 + 230 cm^{-1}, and 3400 = 3088 + 310 cm^{-1}. The relative intensities of all the lines agree with the computations of N.D. Sokolov (Zh. eksperim. i teor. fiziki, 1952, 23, 404) of the probabilities of transitions between corresponding vibrations levels.

Card : 2/2 - 36 -

VAL'KOV, V.I

AUTHORS: Val'kov, V. I., Maslenkova, G. I. 54-4-2/20

TITLE: Raman Spectra of H_2O and D_2O at Different Temperatures (Spektry kombinatsionnogo rasseyaniya H_2O i D_2O pri razlichnykh temperaturakh).

PERIODICAL: Vestnik Leningradskogo Universiteta Seriya Fiziki i Khimii, 1957, Vol. 22, Nr 4, pp. 8-13 (USSR)

ABSTRACT: The bands of O-H and O-D oscillations in the spectrum of "light" ice (H_2O) and "heavy" ice (D_2O) were investigated at different temperatures. Virtually two intense lines were observed, i.e. w_1 = 230 cm^{-1} and w_2 = 310 cm^{-1} for H_2O at -170°C, which have frequencies of w_1 = 212 cm^{-1} and w_2 = 299 cm^{-1} at 0°C; for D_2O. w_1 = 220 cm^{-1} and w_2 = 295 cm^{-1} at -170°C, w_1 = 203 cm^{-1} and w_2 = 275 cm^{-1} at 0° C. respectively.

These values and those obtained for the other temperatures in the Raman spectrum might be explained as interactions of intermolecular and intramolecular oscillations.

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Raman Spectra of H_2O and D_2O at Different Temperatures 54-4-2/20

There are 2 tables, and 10 references, 10 of which are Slavic.

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

Card 2/2

VALKOV, V. V.

USSR/Medicine - New Drugs Jan 52
Glaucoma

"New Soviet Miotic Preparation Benzamon and Its Medical Significance in Glaucoma," Prof B.L. Polyak, V.V. Valkov, Mil Med Acad imeni S.M. Kirov

"Vestnik Oftalmol" Vol XXXI, No 1, pp 18-21

The new Soviet miotic benzamon is similar to furamon in its effect upon glaucoma. It is not inferior to pilocarpine (which has to be imported) and even occasionally surpasses its effectiveness. Benzamon is preferable to furamon because its synthesis does not require the use of iodine and

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because the cost of its manuf is half that of furamon. Benzamon is not hygroscopic and is therefore easy to store and handle. It is advisable to shift from the production of furamon (which now replaces pilocarpine in the USSR to a large extent) to that of benzamon.

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KHMEL'NITSKAYA, Ye.L., doktor ekon. nauk, prof.; LEMIN, I.M., doktor ist. nauk; MAKSIMOVA, M.M., kand. ekon. nauk; GONCHAROV, A.N., kand. ekon. nauk; VASIL'KOV, N.P., kand. ekon. nauk; VAL'KOV, V.V., kand. ekon. nauk; KOLLONTAY, V.M., kand. ekon. nauk; ETINGER, Ya.Ya., kand. ekon. nauk; DALIN, S.A., kand. ekon. nauk; PUSHKIN, A.A., mlad. nauchnyy sotr.; MOROZOV, V., red.; MOSKVINA, R., tekhn. red.

[Economic problems of the "Common Market."]Ekonomicheskie problemy "Obshchego rynka." Moskva, Sotsekgiz, 1962. 510 p. (MIRA 16:3)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy. 2. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy Akademii nauk SSSR (for all except Morozov, Moskvina).
(European Economic Community)

S/147/61/000/004/002/021
E150/E435

10.1240

AUTHOR: Val'kov, Yu.A. (Leningrad)

TITLE: Longitudinal stability of an aeroplane under large disturbances

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika, no.4, 1961, 12-21

TEXT: The use of an explicitly non-linear theory becomes imperative, when it is possible, for an aeroplane to attain such large incidences that its aerodynamic characteristics cease to be linear. Such conditions may be encountered in flight at high altitudes where the incidence is bound to be high (somewhere in the pre-stalling region) and where the atmospheric turbulence is increased. In addition, large disturbances may occur due to a variety of causes such as a vertical gust, dropping of heavy loads or simply an excessive manoeuvre by the pilot. However, the article is not confined to analysing the longitudinal motions of an aeroplane within the non-linear range of aerodynamic characteristics or even to the effects of large disturbances. The author by passes the usual limitations (of the standard theory

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Longitudinal stability ...

of stability) in at least two further respects: firstly he has attempted to relate the motion, following a large disturbance, to the magnitude of such a disturbance and secondly he has amplified the soundness of the standard concept of positive stability. Thus, even if there is adequate mathematical evidence that a longitudinal oscillation is being damped out, as time goes on, one cannot reasonably assume that the original condition of equilibrium will be ultimately regained. If the increment of incident, which occurs during the oscillation, is large, then the aeroplane may stall or drop the wind before the oscillation damps out. In such a case it would, of course, be impossible for the aeroplane to regain the initial equilibrium on its own and, therefore, such an aeroplane could not be called stable. The main aim of the method proposed is to find the conditions in which it could be guaranteed that the stalling incidence cannot be attained during an oscillatory motion. The problem of the longitudinal-stability analysis of aeroplanes flying at high altitudes at large angles of attack near to stall is solved by means of the sectional linearization of the lift and

pitching-moment curves. The whole range of angles of attack is divided into sections in which the aerodynamic characteristics are given by linear functions. The large disturbances considered include vertical wind gust, stick movements, the jettisoning of loads, etc. The system of equations describing the aeroplane motion in the first 5 to 6 seconds after the initial disturbance is reduced to one second-order differential equation for the angle of attack. The solutions obtained for this equation are analysed by plotting the equations of the phase trajectories in phase diagrams. The use of the area and form of the stability boundaries in these diagrams as a criterion in comparing the longitudinal stability of various aeroplanes, or of the same aeroplane under various flight conditions, is explained. The main conclusion is that this method enables one to predict the longitudinal stability in a truer sense than the standard methods - at least when attainment of the stall is feasible.
There are 5 figures.

SUBMITTED: March 1, 1961

Card 3/3

VAL'KOV, Yu.A.

Entry of a winged aircraft in a vertical air gust. Izv. vys. ucheb. zav.; av. tekh. 6 no.4:3-14 '63. (MIRA 17:8)

ACC NR: AP5026259 SOURCE CODE: UR/0331/65/000/007/0029/0030

AUTHOR: Val'kov, Yu. I.

ORG: none

TITLE: New foundations for fastening floating structures

SOURCE: Lesnaya promyshlennost', no. 7, 1965, 29-30

TOPIC TAGS: floating support, floating structure support, reinforced concrete, floating dry dock

ABSTRACT: Two new types of supports for floating structures are described. The first type, consisting of reinforced concrete, is used for anchorage on "soft" ground, e.g., loam, gravel, sandy loam, and pebbles. Three different anchors weighing 1.25, 2.05, and 4.9 tons were tested on the river Vaga in 1964. It was found that the holding force of the anchors was 4 to 5 times their weight in air. The second type of support consists of metal and is used to anchor floating structures to rocky ground. Anchoring is accomplished by lowering the metal anchor into a previously drilled hole in the rock. The performance of both types of supports is tabulated and schematics for both types of support are given (see Fig. 1).

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UDC: 634.0.378.7